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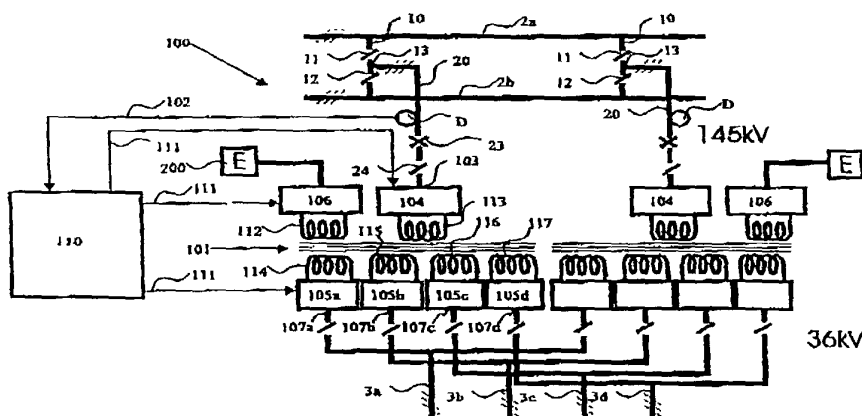
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(54) Title: AN IMPROVED ELECTRICAL SUBSTATION



(57) Abstract: A substation (100) is disclosed for use in a power transmission and distribution network. The substation comprises a single phase isolating high frequency transformer (101) having at least one input winding (112, 113) and at least one output winding (114-117) with corresponding input (104) and output (105) solid state switching networks. Each input solid state switching network (104) comprises a plurality of semiconductor switching devices which receive an input waveform from the transmission network and output a high frequency waveform to the primary winding of the transformer. Likewise, each output solid state switching network (105a-105d) comprises a plurality of semiconductor switching devices receiving a high frequency waveform from the secondary winding (114-117) of the transformer and outputting an output frequency waveform from the substation. A control means (110) is adapted to control the operation of the switching devices of the input and output switching networks (104, 105) to generate the output waveform from the input waveform.

WO 01/71897 A1